

## St. James Terminal and Redstick (Bayou Choctaw) Pipeline Assessment Recommended Maintenance Actions

### Legend for Responses:

Original Issue from FCAR in Black text

**SPLC 1<sup>st</sup> Responses in Red text**

**SPR 1<sup>st</sup> Responses in Blue text**

In general, where the SPLC response is “This deficiency is a result of normal wear and tear” with no intention to repair, the SPR response is as follows:

Severe – Rejected DOE POSITION: Severely corroded equipment, piping, connection hardware and valves are not considered normal wear and tear; it is considered damage, has reached the end of its service life, and must be repaired or replaced.

Moderate – TBD  
Minor - Accepted

**SPLC 2<sup>nd</sup> responses in red text with yellow highlight, including updates post 2/2/2017 and 2/8/2017 DOE meetings**

**SPR 2<sup>nd</sup> Responses written in Green:**

Responses individualized based on local revaluation of equipment, location and significance.

**SPLC 3<sup>rd</sup> responses in red text with turquoise highlight, including updates post 2/2/2017 and 2/8/2017 DOE meetings**

**SPR 3<sup>rd</sup> Responses written in Purple text**

Final position on all items (regardless of completion or not) are highlighted in green whether:

**Accepted** or **Continuing**

## **FCAR Part II - Crude Oil Storage Tanks**

### **Tank Bottoms**

The tank bottom projections (“chimes”) are all similarly vulnerable to water ingress and active corrosion from the underside. Severe damage to the undersides of the projections beyond the shell is visible on all tanks. Whether this damage extends to or beyond the shell cannot be determined by visual inspection. However, as corrosion progresses it becomes increasingly likely that this will be (or is) the case.

We are not aware of any “severe damage to the undersides of the projections” or chimes. The general basis of the findings is that water ingress under the tank chime can result in active corrosion. This is true, however, there is no evidence of any significant underside corrosion to the tank chimes. The technical assessments of tank chimes are defined in API Standard 653. In Section 4.4.5.7 of API 653, the minimum requirements for the projection is the thickness of the plate shall not be less than 0.10 inch at the top of the bottom-to-shell weld and the projection plate shall be at least 3/8 inch in length from the toe of the bottom-to-shell weld. There is no technical data to support deficiencies with tank chimes, and actually, we have data to show we far exceed the API 653 requirements. Also, in 2015, tank chimes 1-4 were spot blasted and recoated.

**SPR Response: Disagree** - Chime damage is apparent at all tanks. Each 653 discussed above was performed a minimum of 10 years ago and as identified through annual facility inspection, corrosion and warping of the chimes has continued over the entire 10 years. Chimes bending and warping show signs of product overloading and chimes were beat down with hammers dislodging scale rust off bottom sides leaving thin walls on chimes. Caulking of chimes has **not** been performed and over the last 10 years which has caused corrosion to accumulate over the years causing metal loss and thinning of the chimes.

**SPLC 2<sup>nd</sup> response:** Ultrasonic thickness (UT) inspections were completed on tank 2 in October 2016 to compare chime thickness between one area with chime corrosion and one without (please see attached report for full results). The results indicate an original chime thickness of about 0.325”, an average thickness in the corroded section of 0.290”, and a minimum chime thickness of 0.207”. While these results indicate compliance with the prior-stated standards, SPLC will repair areas with advanced underside chime corrosion via caulking or other appropriate barrier(s). Additionally, tank chime 6 will be spot blasted and recoated. Additionally, areas where the soil level exceeds the ringwall height will be regraded.

**SPR 2<sup>nd</sup> Response:** SPLC will repair areas with advanced underside chime corrosion via caulking or other appropriate barriers. SPR agrees with SPLC repair and recaulk of advanced corrosion on chimes and regrading areas. Shell will also repair any ben or warped sections. Joint inspection conducted on Feb 8<sup>th</sup> also found that the tank 2 previous ring wall repair has cracked and separated from the base requiring correction and repair by SPLC.

**SPLC 3rd response:** **AGREED**

**SPR Response:** **ACCEPTED**

Appropriate barriers should be put in place to decrease the risk of damage to tank bottoms to the lowest level that is reasonably practicable. Barriers that might be considered include:

- Correcting the grade around the tanks to ensure sufficient clearance between upper surfaces of ringwalls and soil.

This is “nice to do” but will not result in an immediate deficiency. There is no regulatory requirement or industry standard for the minimal clearance between the top surface of the ringwall and the surrounding grade. This task is part of normal maintenance of the containment area.

**SPR Response:** **SPLC will repair areas with advanced underside chime corrosion via caulking or other appropriate barriers.**

**SPLC 3rd response:** **AGREED**

**SPR Response:** **ACCEPTED. SPLC repaired areas with advanced underside chime corrosion and repainted the lower area of tank shell for additional protection.**

- Correcting the grade to ensure sufficient drainage away from tanks toward berms.

This is “nice to do” but will not result in an immediate deficiency. The current grade around the tanks provides sufficient water runoff away from the tank. Although there are some isolated areas which are higher in elevation than the rest of the containment area, the majority of the containment area channels runoff away from the tank.

**SPR Response:** **SPLC will regrade areas around the tanks where the soil level exceeds the ring wall to ensure rainwater is diverted away from foundations.**

**SPLC 3rd response:** **AGREED**

**SPR Response:** **ACCEPTED**

- Repairs and / or upgrades to storm water pumping systems to ensure a rate of removal (from inside the berms) sufficient to prevent immersion of tanks in flood water.
- Bevel horizontal ringwall surfaces to drain away from steel.

This is “nice to do” but not will not result in an immediate deficiency. The current ringwall detail is the same as what was designed and constructed when the tank was built. There is no industry standard or regulation that requires the horizontal surface of the ringwall to be beveled to drain away from the steel.

**SPR Response: SPLC will repair areas with advanced underside chime corrosion via caulking or other appropriate barriers.**

**SPLC 3rd response: AGREED**

SPR Response: ACCEPTED

- Coat horizontal ringwall surfaces to enhance shedding of water and improve adhesion of caulking materials.

This is “nice to do” but will not result in an immediate deficiency. Actually, to coat the horizontal surface of the ringwall is not common in the industry and is definitely above and beyond normal tank maintenance.

**SPR Response: SPLC will repair areas with advanced underside chime corrosion via caulking or other appropriate barriers.**

**SPLC 3rd response: AGREED**

SPR Response: ACCEPTED, No need to coat ring wall if corrective action on chime was performed.

- Remove debris and extruded bottom padding to an appropriate extent beneath chime to facilitate caulking.

This task is normally performed when we conduct activities to maintain the chime seal.

**SPR Response: SPLC will repair areas with advanced underside chime corrosion via caulking or other appropriate barriers.**

**SPLC 3rd response: AGREED**

**SPR Response: ACCEPTED, this activity was completed with the chime repairs.**

- Remove corrosion from underside of chime (prep steel) to a distance sufficient to enable coating and caulking adhesion.

The topside of the chime receives surface prep when the tank is painted. The underside of the chime typically does not receive surface prep. This task is not common in the industry and is definitely above and beyond normal tank maintenance.

**SPR Response: SPLC will repair areas with advanced underside chime corrosion via caulking or other appropriate barriers.**

**SPLC 3rd response:**

**Scope of work (Completed)**

- Cut and remove any loose caulking.
- Spot abrasive blast to SP-6, sweep blast sound areas to SP-7. Areas that don't have corrosion may only be power tool cleaned to SP-3.
- Remove all dust.

**SPR Response: Accepted, Task was completed.**

- Consider the use of “backer rod” or other backing shape for caulking to prevent excessive caulking thickness which causes failure (pulling away from attachment surfaces).

This task is considered when we perform maintenance on the chime seal.

**SPR Response: SPLC will repair areas with advanced underside chime corrosion via caulking or other appropriate barriers.**

**SPLC 3rd response:**  
**Scope of work (Completed)**

- Fill any large gaps between the annular plate and the concrete with backer rod

**SPR Response: Accepted, Completed.**

- Obtain a caulking product with sufficient elasticity to handle both the large gap sizes and the thermal cycling (movement) of the steel.

This task is considered when we perform maintenance on the chime seal.

**SPR Response: SPLC will repair areas with advanced underside chime corrosion via caulking or other appropriate barriers.**

**SPLC 3rd response:**  
**Scope of work (Completed)**

- Apply Sika flex 1A as directed on the data sheet.
- Apply one coat of epoxy over the area and up 1' on the shell.

**SPR Response: Accepted, completed.**

## Coatings (Paint)

The condition of the coatings on tanks and peripheral equipment varies widely from good condition (no apparent damage) to complete coating failure in specific areas with corrosion damage to steel varying from minor all the way to severe (e.g. chime). Mitigations of current damage and barriers to future damage should be implemented. These might include:

- Full repair, including full corrosion removal and paint preparation, to be scheduled per opportunity (such as turnaround).
- Temporary repair of areas of failed (down to steel) coatings and active corrosion.
- Removal of paint from areas where it is undesirable (nameplates, valve stem threads).

The Atmospheric Corrosion Inspection of Sugarland was completed in 2016. Tank failures that will be remediated include:

- Roofs on tanks 1, 4, and 6 – repairs to include spot blasting and recoating up to a full recoat.
- Wind girders on tanks 2 and 3 – repairs to include a full recoat.
- Peripheral equipment is discussed in section “FCAR Part VIII – Inter-Connecting Piping” “Main Terminal”

**SPR Response: Disagree** - Top coatings have failed on most of the tank surfaces. The application of a single top coat over and existing failed paint system does not remediate coating failures and when performed exacerbates the problem.

**SPLC 2<sup>nd</sup> response:** The external shells on all 6 tanks are in good condition. There are isolated areas of top coat failure, but at this time they do not require remediation, as there are existing coating layers under the top coat that provide protection from base metal corrosion. These isolated areas of top coat failure can be classified as normal wear and tear with no threat to asset integrity. Additionally, 3-year Atmospheric Corrosion Inspections (ACIs) were performed in 2016 per Shell internal requirements and did not prompt any remediation to tank shells. The isolated area of coating failure on the north side of tank shell 3 will be spot blasted and recoated.

**SPR 2<sup>nd</sup> Response:** Joint inspection team assessment on Feb 8<sup>th</sup> identified areas of coating failure on the tanks. SPR accepts SPLC strategy that all areas of failure indicated by metal loss or rust will be corrected to include a focus on the areas described by SPLC in first response above.

**SPLC 3rd response: AGREED**

**SPR Response: ACCEPTED**, SPLC continues with repainting areas of the facility that meet failed coating. ECD later in 2019.

## Tank Firewater Systems

- Firewater piping and systems are in a questionable condition that raises safety concerns. Any suspended or supported steel piping and equipment which has been taken out of service permanently should be properly decommissioned, demolished, and removed from the site.
- Any steel that is to be kept in place with an eye to possible future use should be assessed to demonstrate integrity. If the condition of such steel proves acceptable, barriers should be implemented to prevent degradation until such time as it is recommissioned.

[SPR Note:] Reference Fire Suppression System Section for more detail.

Fire equipment is discussed in section “FCAR Part VII – Fire Suppression System Assessment”

**SPLC 3rd response: AGREED APLC is presently returning systems to service.**

**SPR Response: ACCEPTED Several components have been returned to service, however, the system is not yet returned to full configuration. Repair ETC is June 2019.**



## Wind Girders / Stiffening Rings

Barriers should be implemented to prevent damage from coating failure and corrosion. Such barriers might include:

- All general coatings mitigations and barriers listed above under Coatings.
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The Atmospheric Corrosion Inspection of Sugarland was completed in 2016. Tank failures that will be remediated include:

- Wind girders on tanks 2 and 3 – repairs to include a full recoat.

SPR Response: **Accepted**

- Installation of railings around full circumference of each girder / stiffening ring in order to provide safe and regular access for repair and maintenance activities.

The tank did not include a full circumferential hand rail along the wind girder. This is a “nice to have” but not a requirement

SPR Response: **Accepted** Closed – No SPLC action required.

- Installation of additional drainage holes at low points.

The drainage hole detail is from the original tank design. Any additional drainage holes would be “nice to have” but not required.

SPR Response: **Accepted** Closed – No SPLC action required.

## Floating Roofs

On all floating roofs, implementation of the following mitigations and/or barriers should be considered:

- Elimination of coatings deficiencies as per Coatings above.

The Atmospheric Corrosion Inspection of Sugarland was completed in 2016. Tank failures that will be remediated include:

- Roofs on tanks 1, 4, and 6 – repairs to include spot blasting and recoating up to a full recoat
- Budgeted to be done in 2019. Agree to grade the gravel away from the tanks so rain doesn’t slope towards the tank chimes.

SPR Response: **Accepted** Waiting for SPLC to complete this item in 2019 coming year.

- Inspection and repair of seals as necessary.

Tank floating roof seals are routinely inspected and repaired as necessary.

SPR Response: **Accepted**

[SPR Note:] Additional details for all findings/recommendations provided in Facility Condition Assessment Report.

**FCAR Part III – Marine Docks Assessment****Dock No. 1**

- The expansion joints between the concrete panels along the Approach are in Poor condition and should be replaced. The joint filler material is cracked or missing at nearly every joint.

This deficiency was repaired.

**SPR Response: Accepted Verified that expansion joints were replaced.**

- Every rub rail on the mooring and breasting dolphins has at least a few spots of corrosion where the coating system has completely worn off, exposing bare metal. The majority of the rub rails are in Fair condition. The mooring dolphins generally show more wear than the breasting dolphins. To prevent further corrosion and section loss, the rub rails should be cleaned and painted.

This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.

**SPR Response: Accepted No additional action required by SPLC.**

[SPR Note:] Reference Marine Dock section for detail on 42" crude oil pipeline.

**Dock No. 2**

- The expansion joints between the concrete panels along the Approach are in Poor condition and should be replaced. The joint filler material is cracked or missing at nearly every joint.

This deficiency was repaired.

**SPR Response: Accepted Verified that expansion joints were replaced.**

- Cracked or missing grout below loading arms on the Dock No. 2 Loading Platform should be repaired or replaced to prevent corrosion of the anchor bolts and to maintain an even bearing surface.

This deficiency was repaired.

SPR Response: **Accepted** SPR verified that grout was repaired.

## **FCAR Part IV - Site Grounds/Civil Inspection**

### **Site Drainage**

- Many culvert pipes are flowing at less than their maximum capacity due to siltation of the pipe, damage to the pipe, or obstructions to the pipe flow line. All should be corrected.
- Minor erosion in drainage ditches should be addressed.

This deficiency is a result of normal wear and tear with negligible impact on site operations or functionality.

**SPR Response: Accepted No Additional action required of SPLC**

### **Tank Containment Berms and Storage Area**

- Aggregate walkways show erosion and should be remediated.
- Crossing pipes and surrounding ditches show poor drainage and standing water, specifically on the north side of the northern containment berm. Drainage issues should be remediated.
- Storm water grate inlets at some of the containment areas have standing water and may not be properly draining. Any inlets found not properly draining should be remediated.

This deficiency is a result of normal wear and tear with negligible impact on site operations or functionality.

**SPR Response: Accepted No Additional action required of SPLC**

### **Miscellaneous**

- A concrete slab adjacent to the Maintenance Workshop has been damaged so severely that the welded wire fabric is exposed and is in need of repair or replacement.

This deficiency has been repaired.

**SPR Response: Accepted Verified that the condition is repaired.**

- The roadway and parking area east of the Maintenance Workshop appears to be either under construction or is in need of repair or replacement. The drainage flow off of the site at this location is causing erosion to the south of the existing perimeter fence and broken asphalt appears to have been placed north of the fence to try to prevent this erosion. Remediation is required.

The limestone that was placed when the road was cut is packed and in good shape. No sinking is found and no problems with the access across it. The debris will be picked up and discarded.

SPR Response: **Accepted** Verified Complete.

### **FCAR Part V – Terminal and Dock Buildings Inspection**

- Patch damaged and corroded sheeting along the base angles of buildings 707, 716, 719, 720 and 721.

This deficiency is a result of normal wear and tear with negligible impact on site operations or structural integrity.

**SPR Response: Accepted Closed**

- Inspect the underside of the steel decking at buildings 719, 720, and 720 to verify the extent of potential corrosion damage. Make necessary repairs.

This deficiency is a result of normal wear and tear with negligible impact on site operations or structural integrity.

**SPR Response: Accepted Closed**

- Repair the out-of-service fire suppression system at the laboratory hood.

Fire equipment is discussed in section “FCAR Part VII – Fire Suppression System Assessment

**SPR Response: Accepted Lab hood repair will be tracked as part of Fire System Restoration.**

- Replace all lamps in lighting fixtures in all buildings that are burned out.

All lighting deficiencies mentioned in this report will be repaired.

**SPR Response: Accepted Verified as on-going.**

**FCAR Part VI – Redstick Pipeline Valve Stations**

- Recoat the valves at Valve Station Nos. 7 and 8 that have minor corrosion.

This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.

SPR Response: **Accepted**

- Clean out debris located within fenced perimeter of Valve Station No. 7

This deficiency has been repaired.

SPR Response: **Accepted**



**FCAR Part VII – Fire Suppression System Assessment**

- Install new foam deflectors for every tank.
- On the Tank No. 2 piping, remove the screwdriver that is acting as a pipe support and replace with a proper U-Bolt.
- Replace the broken piping between the foam deflector and inside firewater ring at Tank No. 5.
- Recoat all of the firewater and foam piping.
- Remove the algae growing on the inside firewater ring piping at Tank No. 4.

Please see the table below for deficiencies and repair plans related to the Fire Suppression System.

System	Repair Description
TK5 Foam Dam	Install a new foam dam on TK 5 to facilitate the distribution of foam onto the rim seal.
TKS 1-6 Semi-fixed Foam System	Demo existing pipe as required for new installs. Install foam piping with foam chambers for each tank. Run the foam piping for each tank to FDC points located outside the tank dike and accessible from the road. The off-tank piping run may be either above or below ground (per DOE preference). Supply portable monitors, portable trailer, and foam inventory.
TKS 1-6 Cooling Rings	Supply portable monitors, portable trailer, and foam inventory for use with existing water manifolds.
Foam Deluge System (proportioner buildings, meter skids, pump manifold)	Supply portable monitors, portable trailer, and foam inventory for use with existing water manifolds.
Pump capacity for fully engulfed tank fire	The 10,000 GPM diesel pump was out of service upon receipt from DOE.

**SPR Response: Unacceptable** - SPR Level III Design Criteria requires that fire protection installed on crude oil storage tanks shall be per NFPA and API 650 and as follows:

- Floating roof tanks of 150 feet or more in diameter shall have a complete manually actuated foam fire protection system including proportioning equipment and foam concentrate storage.

SPR Level III Design Criteria requires also requires fixed fire protection for all meter/provers and oil pumps, except blanket oil pumps.  
Note: There are no blanket oil pumps at St James.

The SPR is bound by these criteria and consequently, cannot accept the SPLC alternative proposals.

*At the time of the lease to SPLC the fire systems were operational and in compliance with the above criteria. In accordance with the lease agreement these systems must be returned to the same operating state as they were at the beginning of the lease.*

**SPLC 2<sup>nd</sup> response:** The fire systems will be returned to the same level of protection as they were received at the lease inception date, contingent on the DOE's approval.

**SPR 2<sup>nd</sup> Response:** **Accepted** SPLC 2<sup>nd</sup> response. SPR has also submitted the DOE's fire systems design criteria to assist SPLC in restoration efforts. SPR will also work with SPLC to ensure any planned design strategy meets the equivalent or appropriate level criteria.

**SPR – SPLC Restoration in progress to return system to operation. ECD is prior to lease turnover.**

## **FCAR Part VIII – Inter-Connecting Piping**

### **Dock No. 1 and No. 2**

- The 42” crude oil bidirectional pipeline on Dock No. 1 that runs to/from The St. James Terminal is currently out of service. The line is badly corroded, especially the bottom of the pipe, and UT reports indicate over 80% wall loss in some of the pipe. MOV-102 and 106 valves are currently shut and a bypass 24” line downstream of MOV-104 is open that allows crude oil to be sent to/from the St. James Terminal.

The 42” dock 1 pipeline will be returned to service with an 150psig Maximum Operating Pressure (MOP). This will be validated by a pressure test of at least 225psig, which corresponds to historical pressure test records of 235psig (completed on 8/19/1997) and 225psig (completed on 8/23/2001).

**SPR Response: Disagree** - A pressure test alone will not be sufficient to ensure the integrity of the 42” crude oil pipeline. DOT 49 CFR 195 and industry-standard RSTRENG methods (such as B31G) do not allow metal loss greater than 80% wall loss. Since an AUT corrosion mapping inspection completed in 2011 indicated several anomalies at or approaching 80% wall loss, repairs must be made to the line before pressure testing. Since corrosion likely progressed in the 5-plus years after the inspection, it is recommended that the seven (7) locations identified in the 2011 inspection report with wall loss of 60% or greater should be replaced or repaired with full-encirclement welded sleeves prior to pressure testing of the pipeline.

**SPLC 2<sup>nd</sup> response:** As part of the return to service process, a new NDT inspection will be completed on the aboveground piping to identify anomalies with either >80% wall loss or with wall loss that would reduce the pipe strength below 225 psig. These anomalies will be repaired prior to pressure testing. Spot NDT inspections of the underground piping near past leak points were completed in September 2016, which reported a maximum wall loss of 55%-75%, which does not warrant repair at this time (please see attached report for full results). A successful pressure test to 225 psig and removal of the stuck pig will qualify the line’s integrity and operability.

**SPR 2<sup>nd</sup> Response:** SPR acknowledges return of 42” - SPR Piping integrity personnel will be on location to witness additional NDT tests in March. We do not agree that a Guided Wave finding of 55% - 75% wall loss can be interpreted as “does not warrant repair at this time” without further investigation using UT or AUT at the location of the anomaly. From the Guided Wave Report, Section 1.3.7 Interpretation of the Results: this technique is a screening tool that cannot be used to give precise 'sizing' of defects or accurate estimations of remaining wall thickness. The Wavemaker G3 Pipe Screening System is best used in conjunction with other techniques that can provide a detailed

measurement of the wall thickness over a localized area. Any anomalies identified by Guided Wave as Severe Corrosion with 55% - 75% wall loss should be investigated further using UT or AUT at the indicated location of the anomaly to determine if a repair is needed. Guided Wave scanning is not designed to distinguish between 75% wall loss and 80% wall loss. Please provide results of all above-ground inspections to the SPR for review prior to performing any repairs.

SPLC 3rd response: **AGREED** Instrument pig was run in October 2018.

SPR Response: **ACCEPTED** Awaiting results and evaluation of Instrument survey and final repair disposition .

The following actions are recommended to be implemented at Dock Nos.1 and 2:

- Recoat all of the corroded equipment, piping, flanges, bolts, nuts, and valves.
- Replace the severely corroded and uncoated strainer upstream of the SJTP-11 Purge Pump.
- Recoat the T-202 Slop Oil / Drips Tank.
- Recoat SJTP-3 Dock Firewater Pump.
- Replace the section of severely corroded T-201 Slop Oil / Drips Tank outlet piping that is possible causing a leak.
- Replace the bolting on MOV'S 202, 204, and 206.
- Secure the loose piece of insulation on the foam piping leaving Building 721.
- Replace the severely corroded 1-1/2" ball valve and plug located downstream of firewater valve FW64201.
- Secure the loose piece of insulation on the firewater piping on Dock No.2.

#### SPR Response:

- **Severe – Rejected**
  - Severely corroded equipment, piping, connection hardware and valves are not considered normal wear and tear; it is considered damage, has reached the end of its service life, and must be repaired or replaced.
- **Moderate – TBD (Responses based on field revaluation)**
- **Minor – Accepted**

FCAR Pages	Dock	Area	Piece of Equipment	Damage Location	Damage Grade	SPLC Response	SPR Response
398	1	Dock No. 1 Strainers	Access platform	Underneath a pipe support	Corroded	This deficiency is a result of normal wear and tear with negligible impact to structural integrity.	Accepted
398	1	Dock No. 1 Strainers	Overhead of strainers	Pipe supports, U-bolts	Moderate	This deficiency is a result of normal wear and tear with negligible impact to structural integrity.	SPR 2 <sup>nd</sup> Response: Accepted

400	1	SJTP-11 Purge Pump	Replace the severely corroded and uncoated strainer upstream of the SJTP-11 Purge Pump.			Will be repaired.	Accepted
400	1	SJTP-11 Purge Pump	Ball valve upstream	Flanges, bolts, handwheel	Severe	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality, but will be repaired.	Accepted
400	1	SJTP-11 Purge Pump	Inlet piping	"needs to be recoated"		This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality, but will be repaired.	Accepted
402	1	T-202 Slop Oil / Drips Tank and SJTP-10 Slop Oil Pump	Tank outlet piping	"recommended that the entire tank outlet piping be recoated"		Will be repaired.	Accepted
402	1	T-202 Slop Oil / Drips Tank and SJTP-10 Slop Oil Pump	Recoat the T-202 Slop Oil / Drips Tank.			Will be repaired.	Accepted
402	1	T-202 Slop Oil / Drips Tank and SJTP-10 Slop Oil Pump	T-202	2" tank vent piping & its supports	Severe	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality, but will be repaired.	Accepted

403	1	MOV's 102, 104, and 106	MOV's 102, 104, and 106	Bolting, flanges, actuators	Moderate	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	SPR 2 <sup>nd</sup> Response: Accepted
404	1	Dock Firewater Pumps	Recoat SJTP-3 Dock Firewater Pump.			This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	Accepted
404	1	Dock Firewater Pumps	SJTP-3	Leaking		Will be repaired.	Accepted
404	1	Dock Firewater Pumps	SJTP-4	"appears to be leaking"		Will be repaired.	Accepted
407	1	Corrosion Inhibitor Skid and Pump	Corrosion Inhibitor Skid and Pump	Couple of flanges and ball valves	Moderate	Temporary equipment for 42" line.	SPR 2 <sup>nd</sup> Response: Accepted doesn't belong to SPR
409	2	Loading Arms	16" piping DS of the 3 loading arms	"recommended... be recoated"	Minor	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	Accepted
409	2	Loading Arms	Drain lines	2" ball valves, flanges, bolts	Moderate	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	SPR 2 <sup>nd</sup> Response: Accepted

410	2	Dock No. 2 Strainers	Flange bolts, head bolts	"recommended... be recoated"	Moderate	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	SPR 2 <sup>nd</sup> Response: Accepted
410	2	Dock No. 2 Strainers	Dock No. 2 Strainers	"recommended... be recoated"	Minor	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	Accepted
411	2	SJTP-13 Purge Pump	Ball valve upstream	"recommended... be recoated"	Severe	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality. SPLC 2 <sup>nd</sup> response: Referring to the full FCAR's Appendix A, the corrosion on this ball valve does not constitute a severe rating, as the section loss does not exceed 50%. The issue is a coating failure, with section loss likely between 0-15% or 0-30%, and a rating of minor or moderate. SPLC maintains that this is the result of	SPR 2 <sup>nd</sup> Response Agree, Accepted



						normal wear and tear with negligible impact to asset integrity or functionality.	
411	2	SJTP-13 Purge Pump	Three parallel upstream ball valves	Three parallel upstream ball valves	Moderate	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	SPR 2 <sup>nd</sup> Response Accepted
411	2	SJTP-13 Purge Pump	Inlet and outlet piping	"needs to be recoated"		This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	Accepted
413	2	T-201 Slop Oil / Drips Tank and SJTP-12 Slop Oil Pump	Replace the section of severely corroded T-201 Slop Oil / Drips Tank outlet piping that is possible causing a leak.			Will be repaired.	Accepted
413	2	T-201 Slop Oil / Drips Tank and SJTP-12 Slop Oil Pump	T-201	2" tank vent piping	Moderate	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality, but will be repaired.	Accepted
413	2	MOV's 202, 204, and 206:	Replace the bolting on MOV'S 202, 204, and 206.			This deficiency is a result of normal wear and tear with negligible impact to	Accepted

						asset integrity or functionality.	
415	2	DFT-2 Diaphragm Foam Tank	Secure the loose piece of insulation on the foam piping leaving Building 721.			Will be repaired.	Accepted
416	2	Firewater Piping and Valves	6" FW Valve 20-B-93	"recommended... be recoated"	Moderate	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	SPR 2 <sup>nd</sup> Response Accepted
416	2	Firewater Piping and Valves	Replace the severely corroded 1-1/2" ball valve and plug located downstream of firewater valve FW64201.			This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	Accepted
416	2	Firewater Piping and Valves	Secure the loose piece of insulation on the firewater piping on Dock No.2.			Will be repaired.	Accepted

Main Terminal

- Correctly install the Stripper Pump Suction Strainer for Tank No. 4, which was installed in the incorrect direction.
- A swing check valve was installed in place of the Stripper Pump Suction Strainer in the 4" Tank No. 3 stripping line in contrast to the other Crude Oil Storage Tanks. Install the pump suction strainer in lieu of the check valve.
- Replace the missing pressure indicator, PI-2009, on the 4" bypass line from the Stripper Pump No.4 outlet to the 36" tank inlet line.
- Replace the missing pressure indicator, PI-2011, on the 4" bypass line from the Stripper Pump No.6 outlet to the 36" tank inlet line
- Recoat all of the corroded equipment, piping, flanges, bolts, nuts, and valves referenced in the detailed report.
- Replace the pressure indicator on WISTLR-2 Pig Launcher / Receiver, PI-6, which is currently missing.
- Inspect and repair possible leak in the actuator for valve WIM-320-3.
- Replace the severely corroded bolting on the heads of the ASU-3 and 4 Sample Pots.
- Replace the severely corroded spectacle blind upstream of valve SL-4.
- Replace the severely corroded spectacle blind downstream of valve CL-20-10.
- Replace the severely corroded piping, flanges, nuts, bolts, ball and check valves on the discharge piping for the SJTP-21/22 Retention Pond No.2 Pumps.
- Replace the severely corroded 4" outlet piping on the SJT-123 Diesel Fuel Tank located in Zone 5 behind the Control Center and Maintenance.
- Replace the Elbows, flanges, bolts, nuts, and the check and ball valves on the SJTP-19/20 pump discharge which are severely corroded.
- Coat the section of piping upstream of the WISTR-2 Strainer that currently is not coated.
- Coat PSV-WI-120, which is currently not coated.
- Recoat PSVK220, which is severely corroded.
- Recoat the heavily deteriorated access platform for the gate valves on the suction and discharge piping located behind the booster pumps.
- Either coat the uncoated carbon steel bolts and nuts in the stainless steel valves on the Tank No. 1 inlet piping or install isolation kits to prevent galvanic corrosion.
- Either coat the uncoated carbon steel bolts and nuts in the stainless steel valves on the Tank No. 2 inlet piping or install isolation kits to prevent galvanic corrosion.
- Remove the coating on the manual valve stems on the Tank No. 1 piping, which makes it either difficult or impossible to open and close the manual valves.
- Remove the coating on the manual valve stems on the Tank No.3 piping, which makes it either difficult or impossible to open and close the manual valves.
- Remove the coating on the manual valve stems on the Tank No. 4 piping, which makes it either difficult or impossible to open and close the manual valves.

- Repair the small hole near the manway cover of the Firewater Tank.
- Repair the leak in the Valve 20-B-85 on the firewater valve manifold.
- Repair the leak in the SJTP-25 Diesel Engine Fire Pump discharge piping.
- Replace the structural support on the access platform located behind the pipe headers that is cracked and replace the missing bolting on one of the supports.
- Inspect and repair possible leaks on valves T-320-DR5 and T-320-DR1.
- The roof drain waterway for Tank No. 3 is damaged and is blocking the path from the drain line to the roof drain pond, which makes it difficult to divert water to the pond. Repair the waterway.
- The roof drain waterway for Tank No. 4 is damaged and is blocking the path from the drain line to the roof drain pond, which makes it difficult to divert water to the pond. Repair the waterway.
- The roof drain waterway for Tank No. 5 is damaged and is blocking the path from the drain line to the roof drain pond, which makes it difficult to divert water to the pond. Repair the waterway.
- The roof drain waterway for Tank No. 6 is damaged and is blocking the path from the drain line to the roof drain pond, which makes it difficult to divert water to the pond. Repair the waterway.
- Replace the damaged Flow Distributor Box for the Sanitary Waste Treatment System.
- Drain the water that has collected in the SS/Houma Sample Pot Skid which is corroding the bottom of the sample pot structural legs.
- Drain the liquid that has collected in the ASU-4 Crude Oil Sampler System skid, which is causing corrosion to the bottom parts of the support stand legs for both sample pots.
- Drain the water that has collected in the Bayou Choctaw Pot Skid which is corroding the bottom of the sample pot structural legs.

#### SPR Response:

- **Severe – Rejected**
  - **Severely corroded equipment, piping, connection hardware and valves are not considered normal wear and tear; it is considered damage, has reached the end of its service life, and must be repaired or replaced.**
- **Moderate – TBD – (SPR 2<sup>nd</sup> response, responses based on field verification)**
- **Minor – Accepted**
- **Note: Items identified that are in progress will be reidentified and tracked on the latest annual assessment.**

FCAR Pages	Zone	Area	Piece of Equipment	Damage Location	Damage Grade	SPLC Response	SPR Response
351	1	Water Treatment Area	SJT-SEP1 Oil Water Separator	Top, edges	Severe	<p>This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality. Also, SJT-SEP1 was out of service when received from the DOE.</p> <p><b>SPLC 2<sup>nd</sup> response:</b> Missing lids will be replaced.</p>	<p><b>SPR 2<sup>nd</sup> Resp:</b> <b>Accepted</b></p>
351	1	Water Treatment Area	SJT-S3 Oil Sump	Top, sides	Moderate	<p>Will be repaired.</p>	<p><b>Accepted</b></p>
351	1	Water Treatment Area	SJT-SEP2A/B Oil Water Separators	Vent piping	Severe	<p>This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality. Also, SJT-SEP2A was out of service when received from the DOE.</p> <p><b>SPLC 2<sup>nd</sup> response:</b> Out of service when received from the DOE.</p>	<p><b>SPR 2<sup>nd</sup> Response:</b> Separator was out of service when received, no SPLC action required</p>

351	1	Water Treatment Area	SJT-WB1 Weir Box	Side	Moderate	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	<u>SPR Response:</u> <b>Accepted</b>
356	2	Transfer Pump Station	Transfer Pump Station	Most flange bolts and nuts	Moderate	Will be repaired as needed.	<b>Accepted</b>
356	2	Transfer Pump Station	SJT 8	Structural supports	Moderate	This deficiency is a result of normal wear and tear with negligible impact to structural integrity.	<b>SPR 2<sup>nd</sup> response accepted</b>
356	2	Transfer Pump Station	Access platform behind pumps	Coating deterioration	Severe	Will be repaired.	<b>Accepted</b>
356	2	Transfer Pump Station	WI-20-CK	Flanges, nuts, bolts	Severe	Will be repaired.	<b>Accepted</b>
358	2	BC/WI Meter Prover	XSPR2 nozzle	XSPR2 nozzle	Moderate	Will be repaired.	<b>Accepted</b>
358	2	BC/WI Meter Prover	BC/WI Meter Prover	Flange bolting	Moderate	Will be repaired as needed.	<b>Accepted</b>
358	2	WI Meter Run	WISTR-3 Strainer	Head	Moderate	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	<b>SPR 2<sup>nd</sup> response SPLC strategy implemented for all rust areas Accepted</b>
358	2	WI Meter Run	WI Meter Run	Most Pipe Supports	Moderate	Further evaluation will be completed to determine repair requirements.	<b>SPR 2<sup>nd</sup> response SPLC strategy implemented for all rust</b>

							areas Accepted
358	2	WI Meter Run	WI Meter Run	Most Flange bolts	Moderate	Will be repaired as needed.	Accepted
358	2	WI Meter Run	Inspect and repair possible leak in the actuator for valve WIM-320-3.			No leak found	Accepted
358	2	WI Meter Run	Coat the section of piping upstream of the WISTR-2 Strainer that currently is not coated.			Further evaluation will be completed to determine repair requirements.	SPR 2 <sup>nd</sup> response SPLC strategy implemented for all rust areas Accepted
359	2	WI Meter Run	Replace the severely corroded bolting on the heads of the ASU-3 (WI) and 4 (BC) Sample Pots.			This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	SPR 2 <sup>nd</sup> response SPLC strategy implemented for all rust areas Accepted
359	2	WI Meter Run	Sample Pots 1 and 2 (ASU-3)	Bottom of support stand legs	Severe	Will be repaired as needed.	Accepted
361	2	BC Meter Run	BC Meter Run	Flanges, nuts, bolts	Severe	Will be repaired as needed.	Accepted
361	2	BC Meter Run	BC Meter Run	Pipe supports	Moderate	Further evaluation will be completed to determine repair requirements.	SPR 2 <sup>nd</sup> response SPLC strategy implemented for all rust areas Accepted

361	2	BC Meter Run	BC Meter Run	Sections of piping	Moderate	Will be repaired as needed.	Accepted
361	2	BC Meter Run	3 strainers	Heads	Moderate	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	SPR 2 <sup>nd</sup> response SPLC strategy implemented for all rust areas Accepted
361	2	BC Meter Run	Drain the liquid that has collected in the ASU-4 Crude Oil Sampler System skid, which is causing corrosion to the bottom parts of the support stand legs for both sample pots.			This deficiency is a result of normal wear and tear with negligible impact to structural integrity.	Accepted
363	2	Piping Behind ASU-4 Crude Oil Sampler System	Replace the severely corroded spectacle blind upstream of valve SL-4.			This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	Accepted
363	2	Piping Behind ASU-4 Crude Oil Sampler System	Replace the severely corroded spectacle blind downstream of valve CL-20-10.			This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	Accepted



363	2	Piping Behind ASU-4 Crude Oil Sampler System	Drain the water that has collected in the SS/Houma Sample Pot Skid which is corroding the bottom of the sample pot structural legs.			This deficiency is a result of normal wear and tear with negligible impact to structural integrity. SPLC 2 <sup>nd</sup> response: Water will be removed	SPR 2 <sup>nd</sup> response Accepted 2 <sup>nd</sup> SPLC response
363	2	Piping Behind ASU-4 Crude Oil Sampler System	Drain the water that has collected in the Bayou Choctaw Pot Skid which is corroding the bottom of the sample pot structural legs.			This deficiency is a result of normal wear and tear with negligible impact to structural integrity. SPLC 2 <sup>nd</sup> response: Water will be removed	SPR 2 <sup>nd</sup> response Accepted 2 <sup>nd</sup> SPLC response
365	2	Piping Behind ASU-3 Crude Oil Sampler System	Coat PSV-WI-120, which is currently not coated.			Will be repaired.	Accepted
365	2	Piping Behind ASU-3 Crude Oil Sampler System	Recoat PSVK220, which is severely corroded.			Will be repaired.	Accepted
365	2	Piping Behind ASU-3 Crude Oil Sampler System	Disassembled/Removed PSV	Blind flanges, nuts, and bolts	Severe	Will be repaired.	Accepted
367	2	WISTLR-2 Pig Launcher/Receiver	Flanges for PI-6	Flanges for PI-6	Moderate	Repair completed.	Accepted
367	2	WISTLR-2 Pig Launcher/Receiver	Replace the pressure indicator on WISTLR-2 Pig Launcher / Receiver, PI-6, which is currently missing.			Will be repaired.	Accepted

367	2	WISTLR-2 Pig Launcher/Receiver	PA-5B	Spectacle Blind	Moderate	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	SPR 2 <sup>nd</sup> response: Accepted
368	2	Crude Oil Storage Tank No. 1 Piping	Either coat the uncoated carbon steel bolts and nuts in the stainless steel valves on the Tank No. 2 inlet piping or install isolation kits to prevent galvanic corrosion.			This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	SPR 2 <sup>nd</sup> response Accepted
368	2	Crude Oil Storage Tank No. 1 Piping	Remove the coating on the manual valve stems on the Tank No. 1 piping, which makes it either difficult or impossible to open and close the manual valves.			Will be repaired.	Accepted
370	3	Retention Pond No. 1	Replace the Elbows, flanges, bolts, nuts, and the check and ball valves on the SJTP-19/20 pump discharge which are severely corroded.			Will be repaired.	Accepted

370	3	Firewater Tank V3	Firewater Tank V3	Base of tank, manway cover, access hatch on tank roof, stairs to roof	Moderate	Repair completed.	Accepted
370	3	Firewater Tank V3	Firewater Tank V3	4" Drain outlet	Heavily	Repair completed.	Accepted
370	3	Firewater Tank V3	Repair the small hole near the manway cover of the Firewater Tank.			Repair not recommended - hole is used during weld integrity verification.	Accepted
370	3	Firewater Tank V3	Repair the leak in the Valve 20-B-85 on the firewater valve manifold.			Repair completed.	Accepted
372	3	Firewater Building 716	Repair the leak in the SJTP-25 Diesel Engine Fire Pump discharge piping.			Repair completed.	Accepted
373	3	Crude Oil Storage Tank No. 2 Piping	T-220-DR5, T-220-DR1, T-220-DR4	Lever on valves	Moderate	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	SPR 2 <sup>nd</sup> response Accepted
373	3	Crude Oil Storage Tank No. 2 Piping	Either coat the uncoated carbon steel bolts and nuts in the stainless steel valves on the Tank No. 2 inlet piping or install isolation kits to prevent galvanic corrosion.			This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	SPR 2 <sup>nd</sup> response Accepted

375	4	Pipe Header	SL-3	Hand wheel, actuator	Moderate	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	SPR 2 <sup>nd</sup> response Accepted
375	4	Pipe Header	Replace the structural support on the access platform located behind the pipe headers that is cracked and replace the missing bolting on one of the supports.			This deficiency is a result of normal wear and tear with negligible impact to structural integrity.	SPR 2 <sup>nd</sup> response Accepted
378	4	Crude Oil Storage Tank No. 3 Piping	A swing check valve was installed in place of the Stripper Pump Suction Strainer in the 4" Tank No. 3 stripping line in contrast to the other Crude Oil Storage Tanks. Install the pump suction strainer in lieu of the check valve. (Also the FCAR notes the check valve is installed backwards)			Repair not recommended - strainer caused frequent operational upsets (remaining strainers do not have internals). Also, this check valve has no internals.	SPR 2 <sup>nd</sup> response Accepted

378	4	Crude Oil Storage Tank No. 3 Piping	Remove the coating on the manual valve stems on the Tank No.3 piping, which makes it either difficult or impossible to open and close the manual valves.			Will be repaired.	Accepted
378	4	Crude Oil Storage Tank No. 3 Piping	Inspect and repair possible leaks on valves T-320-DR5 and T-320-DR1.			Will be repaired.	Accepted
378	4	Crude Oil Storage Tank No. 3 Piping	The roof drain waterway for Tank No. 3 is damaged and is blocking the path from the drain line to the roof drain pond, which makes it difficult to divert water to the pond. Repair the waterway.			This deficiency is a result of normal wear and tear with negligible impact on site operations or functionality. SPLC 2 <sup>nd</sup> response: No issue functionally, but will be repaired.	SPR 2 <sup>nd</sup> response: Accepted SPLC 2 <sup>nd</sup> response
378	4	Crude Oil Storage Tank No. 3 Piping	Section of piping in grass in front of tank	Pipe comes AG then goes back BG	Severe	Will be repaired.	Accepted
381	5	Booster Pump Station	SJT-1	Flange bolts	Moderate	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	SPR 2 <sup>nd</sup> response Accepted
381	5	Booster Pump Station	SJT-2	Drain piping, flanges, flange bolts	Moderate	This deficiency is a result of normal wear and tear with negligible impact to	SPR 2 <sup>nd</sup> response Accepted

						asset integrity or functionality.	
382	5	Booster Pump Station	SJT-3 through SJT-5	"Similar to SJT-1 and SJT-2"		This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	SPR 2 <sup>nd</sup> response Accepted
383	5	Booster Pump Station	Recoat the heavily deteriorated access platform for the gate valves on the suction and discharge piping located behind the booster pumps.			This deficiency is a result of normal wear and tear with negligible impact to structural integrity.	SPR 2 <sup>nd</sup> response Accepted
384	5	Valve Station	Piping behind SL-2	Piping behind SL-2	Moderate	Temporary equipment for 42" line.	Accepted
384	5	Retention Pond No. 2	Replace the severely corroded piping, flanges, nuts, bolts, ball and check valves on the discharge piping for the SJTP-21/22 Retention Pond No.2 Pumps.			Will be repaired.	Accepted

386	5	SJT-123 Diesel Fuel Tank	Replace the severely corroded 4" outlet piping on the SJT-123 Diesel Fuel Tank located in Zone 5 behind the Control Center and Maintenance.			Will be repaired.	Accepted
387	5	Crude Oil Storage Tank No. 4 Piping	Correctly install the Stripper Pump Suction Strainer for Tank No. 4, which was installed in the incorrect direction.			Repair not recommended - strainer caused frequent operational upsets (remaining strainers do not have internals).	<u>SPR Response:</u> Accepted
387	5	Crude Oil Storage Tank No. 4 Piping	Remove the coating on the manual valve stems on the Tank No. 4 piping, which makes it either difficult or impossible to open and close the manual valves.			Will be repaired.	Accepted
387	5	Crude Oil Storage Tank No. 4 Piping	The roof drain waterway for Tank No. 4 is damaged and is blocking the path from the drain line to the roof drain pond, which makes it difficult to divert water to the pond. Repair the waterway.			This deficiency is a result of normal wear and tear with negligible impact on site operations or functionality. SPLC 2 <sup>nd</sup> response: No issue functionally, but will be repaired.	SPR 2 <sup>nd</sup> response accepted SPLC 2 <sup>nd</sup> response

387	5	Crude Oil Storage Tank No. 4 Piping	Replace the missing pressure indicator, PI-2009, on the 4" bypass line from the Stripper Pump No.4 outlet to the 36" tank inlet line.			Will be repaired.	Accepted
390	6	Crude Oil Storage Tank No.5 Piping	Crude Oil Storage Tank No.5 Piping	Handwheels on most valves	Corroded	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	Accepted
390	6	Crude Oil Storage Tank No.5 Piping	Crude Oil Storage Tank No.5 Piping	Flanges, nuts, bolts	Corroded	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	Accepted
390	6	Crude Oil Storage Tank No.5 Piping	Crude Oil Storage Tank No.5 Piping	4" outlet piping	Moderate	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	Accepted
390	6	Crude Oil Storage Tank No.5 Piping	The roof drain waterway for Tank No. 5 is damaged and is blocking the path from the drain line to the roof drain pond, which makes it difficult to divert water to the pond. Repair the waterway.			This deficiency is a result of normal wear and tear with negligible impact on site operations or functionality. SPLC 2 <sup>nd</sup> response: No issue	SPR 2 <sup>nd</sup> response Accepted SPLC 2 <sup>nd</sup> response



						functionally, but will be repaired.	
393	7	Crude Oil Storage Tank No.6 Piping	Crude Oil Storage Tank No.5 Piping	Valves, valve handwheels, flanges, flange bolting, piping	Corroded	This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.	Accepted
393	7	Crude Oil Storage Tank No.6 Piping	Replace the missing pressure indicator, PI-2011, on the 4" bypass line from the Stripper Pump No.6 outlet to the 36" tank inlet line			Will be repaired.	Accepted
393	7	Crude Oil Storage Tank No.6 Piping	The roof drain waterway for Tank No. 6 is damaged and is blocking the path from the drain line to the roof drain pond, which makes it difficult to divert water to the pond. Repair the waterway.			This deficiency is a result of normal wear and tear with negligible impact on site operations or functionality. SPLC 2 <sup>nd</sup> response: No issue functionally, but will be repaired.	SPR 2 <sup>nd</sup> response Accepted SPLC 2 <sup>nd</sup> response

395	8	Sanitary Waste Treatment System	Treatment Units SJWT-1/2	Exterior of both chlorinators	Severe	<p>This deficiency is a result of normal wear and tear with negligible impact to asset integrity or functionality.</p> <p>SPLC 2<sup>nd</sup> response:</p> <p>No issue functionally, but will be repaired.</p>	<p>SPR 2<sup>nd</sup> response</p> <p>accepted</p> <p>SPLC 2<sup>nd</sup> response</p>
395	8	Sanitary Waste Treatment System	Replace the damaged Flow Distributor Box for the Sanitary Waste Treatment System.			Will be repaired.	Accepted

## **FCAR Part IX – Primary Electrical Equipment**

### **5kV Main Substation Switchgear and Building (Bldg. 722)**

- Re-caulk or install weather stripping around all openings such as AC, doors, conduit penetrations etc.
- Clean away dirt and rust and coat metal doors and interior and exterior steel surfaces of the building.

This deficiency is a result of normal wear and tear with negligible impact on site operations or functionality.

**SPR Response:** **Accepted**

### **5kV Distribution System and Control Building Electrical Room**

- Install weather stripping under roll up door to close gap between door and floor to prevent water intrusion.
- Replace burnt out and missing bulbs in fixtures.

This deficiency is a result of normal wear and tear with negligible impact on site operations or functionality.  
All burnt out bulbs are discussed in FCAR Part V

**SPR Response:** **Accepted**

### **480V Distribution System**

- Replace missing cover bolts in MCCs, terminal boxes and PLC RTU cabinets.
- Remove excessive rust from MCCs and Termination boxes and repair and coat the steel.

These deficiencies will be repaired as needed.

**SPR Response:** **Accepted**, additional specifics were listed on the 2018 annual assessment and will be tracked on that action report.

### **Dock Nos. 1 and 2 Recommendations**

- Replace all damage cables and conduits.
- Clean and repaint rusting motors and supports.
- Add support for loose cables between walkways and docks.
- Cover and seal outdoor electrical panel openings.
- Repair or replacing doors on the junction boxes that have heavy rust present.
- Replace the burnt out light bulbs for general area lighting and Nav-Aids.
- Install tags on all instruments with missing tags.
- Move the portable toilet so it is not blocking the electrical panel on Dock No. 1

These deficiencies will be repaired as needed.

All burnt out bulbs are discussed in FCAR Part V

SPR Response: Accepted

#### Control Center Building, Generator and Transfer Switch Findings

- Replace the volume gauge on Transformer #1.
- Repair damaged cables on sewerage lift station
- Replace light bulbs in MCC Room

These deficiencies will be repaired.

All burnt out bulbs are discussed in FCAR Part V

SPR Response: Accepted

#### Maintenance Shop

- Replace the fuel dispensing station and the conduit running to it.

The fuel dispensing station was out of service when the site was received from the DOE.

SPR Response: Accepted

- Secure loose cable on North side of building and provide proper penetration to the building.

This deficiency will be repaired.

SPR Response: Accepted

- Replace bulbs in interior and exterior lighting

All burnt out bulbs are discussed in FCAR Part V

#### Spare Parts Warehouse

- Secure loose cable on North side of building and provide proper penetration to the building.
- Replace bulbs in interior and exterior lighting

This deficiency will be repaired.

SPR Response: Accepted

All burnt out bulbs are discussed in FCAR Part V

#### Facility Grounds

- Replace bent covers and panels where necessary if they cannot be sealed properly.
- Replace cables and connectors in the tank farm as needed
- Replace area lighting bulbs or photocells as necessary to provide adequate area lighting throughout the grounds of the facility.

These deficiencies will be repaired as needed.

SPR Response: Accepted

All burnt out bulbs are discussed in FCAR Part V

Sugarland Terminal 2016 Annual Lease Performance Evaluation Item: Building 703 - Gutter on rear extension rusting through

This deficiency is a result of normal wear and tear with negligible impact on site operations or functionality.

SPR Response: Accepted